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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,927	07/24/2001	Felix Henry	1807.1618	3539
5514	7590	10/02/2006	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			LAROSE, COLIN M	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/910,927	<b>Applicant(s)</b> HENRY ET AL.	
	<b>Examiner</b> Colin M. LaRose	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 July 2006 has been entered.

### ***Response to Amendments and Arguments***

2. Applicant's arguments regarding independent claims 1 and 7 have been fully considered and are sufficient to overcome the previous 103(a) rejection over U.S. Patent 6,314,452 by Dekel et al. ("Dekel") in view of "The Importance of Percent-Done Progress Indicators for Computer-Human Interfaces" by Myers. It does not appear that Dekel addresses the new claim limitation of the coded image [including] "at least a bitplane to be decoded last corresponding to data not belonging to the region of interest."

Therefore, the previous rejection has been withdrawn. However, new grounds of rejection are presented below in view of U.S. Patent Application Publication 2004/0234141 by Christopoulos et al. ("Christopoulos").

### ***Claim Objections***

3. In view of Applicant's amendment to claim 17, the previous objection thereto has been withdrawn.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 16-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 16-20 defines a storage medium embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed storage can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory (i.e. change "storage medium" to "computer-readable medium"). Any amendment to the claim should be commensurate with its corresponding disclosure. Also, in claim 16, "program" should be change to "computer program" for clarity.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3, 5-9, and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,452 by Dekel et al. ("Dekel") in view of "The Importance of Percent-Done Progress Indicators for Computer-Human Interfaces" by Myers and U.S. Patent Application Publication 2004/0234141 by Christopoulos et al. ("Christopoulos").

Dekel discloses an image transmission system where a user at a client computer can request an image to be delivered from a server. Before or during transmission of the image, the user can request a region of interest (ROI) within the image to be delivered. The server receives and processes the user's request for an ROI in real time and then transmits the ROI data to the

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client progressively. Upon receipt, the client performs progressive decoding and displaying of the ROI data. See figure 2.

Regarding claims 1, 7, 17, 18, and 20, Dekel discloses a method/device (*figures 1 and 16*) for alerting during the progressive decoding of a digital image coded by bitplanes with a region of interest (ROI) coded by bitplanes to be decoded first, comprising the steps of:

detecting an end of decoding of the region of interest by checking at least a number of received bitplanes (*block 1601 detects an end to the decoding of an ROI based on the number of received bitplanes*); and

activating of an indication of the end of decoding of the said region of interest (*block 1605: if an end to the decoding of the ROI is detected, then a command is issued to the client to "stop decoding" -- i.e. the process block 1605 activates an indication to the client computer that decoding should cease*).

Dekel does not disclose that the indication is activated "by displaying an indicator in an indicator-display area at a predetermined position on a screen," as claimed. Rather, Dekel only appears to disclose providing an indication to the client computer that is internal to the computer-implemented method of figure 16 and is not displayed to a user.

Myers discloses the desirability of displaying a progress indicator to a user while a computer is processing a given task. "Percent-done progress indicators are a technique for graphically showing how much of a long task has been completed," and they "give the user enough information at a quick glance to estimate how much of the task has been completed and when the task will be finished" (column 2, page 11). Myers teaches that virtually any computer process that takes time to complete would benefit from displaying a progress indicator to a user

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– e.g. file transfers, program loading, compilation, text processing, etc. (column 2, page 12). In particular, progress indicators such as shown in figures 1-4 inform a user of the beginning and ends of a process as well as the progress thereof.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dekel by Myers to display a progress indicator at a predetermined position on a screen in order to inform the user of the end of decoding of an ROI since Dekel discloses a data transfer process (figure 2) that involves transmitting, decoding, and displaying a user-specified ROI, and Myers teaches that, for computer processes such as file transfers and the like, it is preferable to provide the user with a displayed indication of the progress of the process so that the user is informed of the overall duration and remaining time required to execute the process (see e.g. column 1, page 13: “people ... prefer to have progress indicators”). Such a displayed indication would prevent user frustration and the like caused by not knowing how long a certain computer process takes or when the process will end.

Also, Dekel does not appear to disclose the coded image [includes] “at least a bitplane to be decoded last corresponding to data not belonging to the region of interest,” as claimed. As Applicant correctly points out on p. 10 of the Remarks, Dekel does not disclose such a limitation because Dekel performs encoding only on the ROI and ignores other areas of the image not belonging to the ROI, such as the background.

Christopoulos, like Dekel, discloses a modification of the JPEG standard whereby a user can select a ROI, which is then both coded and transmitted separately from other regions. In paragraphs [0099] and [0100], Christopoulos teaches a method for encoding, transmitting, and

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decoding ROIs in such a manner. Essentially, prior to encoding, the ROI coefficients are "shifted or multiplied" by a certain number so that all of "the smallest ROI coefficient is larger than the largest background coefficient." As a result, all of the bitplanes corresponding to the ROI are coded and transmitted prior to any of the background coefficients being coded and transmitted. The ROI "will be reconstructed completely" at the decoder before any of the background is decoded and rendered.

Dekel's system teaches coding, transmitting, and decoding only the ROI, and not the background area, presumably because fast rendering for the ROI is desired, and the background area is deemed to be so unimportant that it can be neglected. Christopoulos, however, recognizes that a user may want to view the background in addition to the ROI, and provides an improvement upon Dekel whereby the bitplanes of the background area are coded and rendered after the coding and rendering of the ROI.

Such a modification to Dekel would have been obvious in view of Chrisopoulos' teaching that when an ROI is to be progressively encoded and decoded by bitplanes, it is desirable to progressively encode and decode the background afterwards in case the user wishes to view the background surrounding the ROI. In other words, such a modification to Dekel would cause "at least a bitplane to be decoded last corresponding to data not belonging to the region of interest." In addition, such a modification would not destroy the principle operation of Dekel's system, since the bitplanes of the background area are encoded only after all the bitplanes of the ROI are encoded and transmitted.

Further regarding claims 17, 18, and 20, Dekel does not expressly disclose that the storage medium, such as a floppy disk or CD-ROM, is detachably mountable on a device



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according to claim 7 or 8, however, at the time of the invention, using floppy disks and CD-ROM disks to store computer programs as a detachably mountable storage medium was a conventional practice and would have been an obvious expedient to those skilled in the art.

*Official Notice taken.*

Further regarding claim 20, the combination of Dekel and Myers discloses the method/device according to claims 1 and 16, further comprising steps/means for:

activation of an indication of the start of decoding of the said region of interest, and  
activation of an indication of the progress of the decoding of the said region of interest  
(*i.e. Myers' progress indicators indicate both the start, progress, and end of a given process*).

Regarding claims 2 and 8, the combination of Dekel and Myers discloses the method/device according to claims 1 and 7, further comprising steps/means for:

activation of an indication of the start of decoding of the said region of interest, and  
activation of an indication of the progress of the decoding of the said region of interest  
(*i.e. Myers' progress indicators indicate both the start, progress, and end of a given process*).

Regarding claims 3 and 9, the combination of Dekel and Myers discloses a method/device according to claims 1 and 7, further comprising steps/means for:

activating an indication of decoding of the coded data of the image which are not in the region of interest, and

activating an indication of the end of decoding of the coded data of the image which are not in the said region of interest (*i.e. when a user requests a new region of interest, e.g.*

*corresponding to image data that is not in the old ROI (Dekel, col. 5/16-21), it would likewise have been obvious to activate indications of the progress and end of the decoding of the new ROI based on Myers's teachings, as explained above for claims 1 and 7).*

Regarding claims 5 and 11, the combination of Dekel and Myers teaches a data receiving method/device incorporating the alerting method according to claim 1 and 7 (*client computer 110, figure 1 of Dekel*).

Regarding claims 6 and 12, the combination of Dekel and Myers teaches a method/device for progressive decoding of a digital image coded with a region of interest, incorporating the alerting method/device according to claims 1 and 7 (*client computer 110, figure 1 of Dekel*).

Regarding claim 13, Dekel discloses a device according to claim 7 or 8 characterised in that the detection and activation means are incorporated into:

a microprocessor (*col. 4/3-6: client computer 110 has microprocessor*);

a read-only memory (*i.e. ROM embodied in client computer 110, figure 1*) including a program for processing the data, and

a random-access memory (*i.e. RAM embodied in client computer 110, figure 1*) including registers suitable for registering variables modified in the course of the running of the said program.

Regarding claim 14, the combination of Dekel and Myers teaches an apparatus for processing a digital image, including means suitable for implementing the method according to claim 1 or 2 (*client computer 110, figure 1 of Dekel*).

Regarding claim 15, the combination of Dekel and Myers teaches an apparatus for processing a digital image, including the device according to claim 7 or 8 (*client computer 110, figure 1 of Dekel*).

Regarding claim 16, the combination of Dekel and Myers teaches a storage medium storing a program for alerting during the progressive decoding of a digital image coded with a region of interest according to claim 1 (*client computer 110, figure 1 of Dekel, stores a computer program for performing the alerting*).

Regarding claim 19, Dekel discloses a storage program on a storage medium and comprising computer executable instructions for causing a computer to alert during the progressive decoding of a digital image coded with a region of interest according to claim 1 or 2 (*i.e. Dekel discloses implementing the method in a computer, which necessarily executes programmed instructions*).

7. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,452 by Dekel et al. ("Dekel") in view of "The Importance of Percent-Done Progress Indicators for Computer-Human Interfaces" by Myers and U.S. Patent Application Publication 2004/0234141 by Christopoulos et al. ("Christopoulos"), as applied to claims 1 and 7, and further in view of U.S. Patent 5,436,637 by Gayraud et al. ("Gayraud").

Regarding claims 4 and 10, Myers discloses providing the displayed indication in a window on the screen (figure 3), however, Myers does not appear to disclose that the position of the indicator-display area is alterable by a user.

Gayraud discloses that conventionally, graphical user interfaces employ windows. Gayraud further discloses that such windows are alterable by a user. That is, the user may change the size, position, shape, etc. of the window according to individual preferences. See column 1, lines 49-63. In view of this teaching, it would have been obvious to those skilled in the art at the time of the invention that Myers's window containing a progress indicator (i.e. figure 3) was alterable by a user, and that a user could change the position of the window and thus the progress indicator at will, based on personal preference or the like.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu, can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry

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of a general nature or relating to the status of this application or proceeding can also be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.



Colin M. LaRose  
Group Art Unit 2624  
27 September 2006